

# Tobamovirus Expression Vectors

## TMV



## TMV-Expression Vector

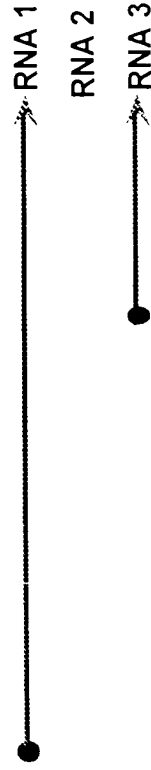
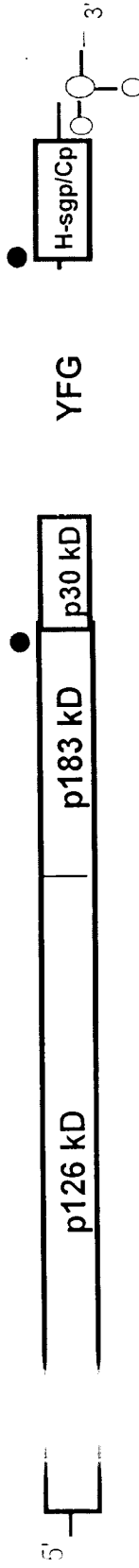


FIGURE 1

# Tobamovirus Vector for rGal-A Expression

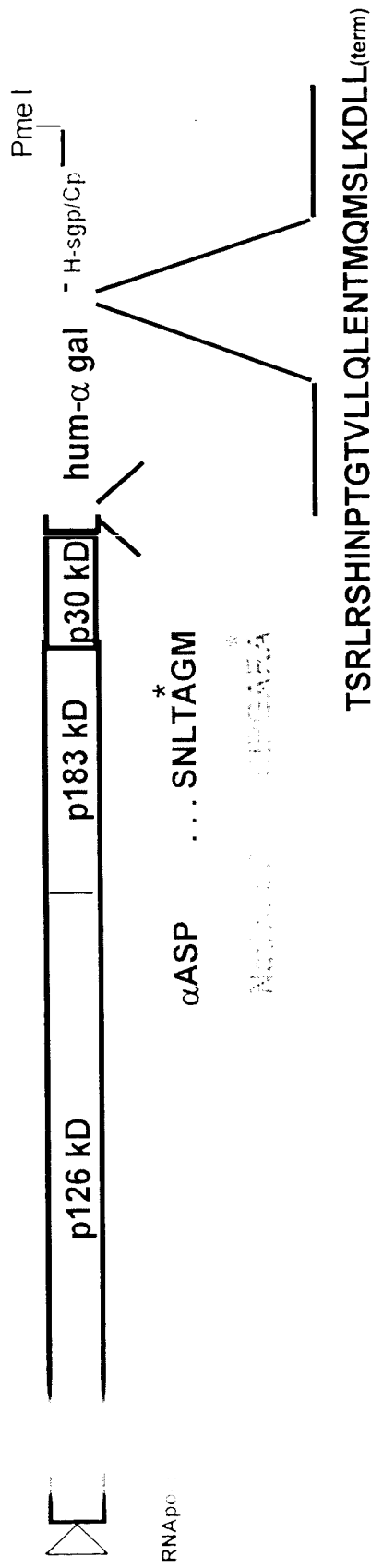


FIGURE 2

# Accumulation and Activity of WT rGal-A

A.

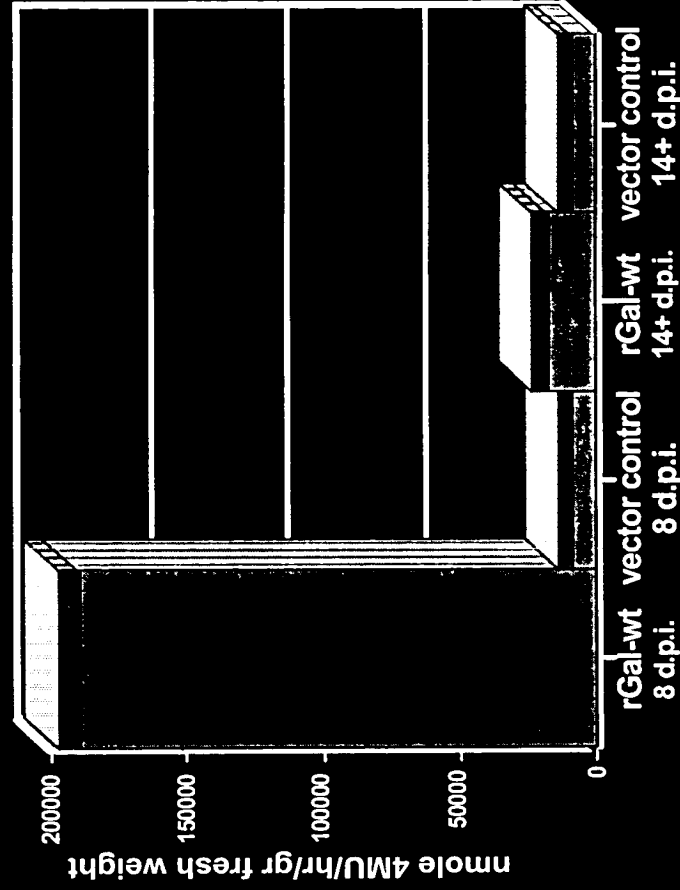
rGAL-A hGAL-A  
1 2 100 ng C.V.



1 2 3 4

**Western Analysis**  
total plant soluble extract  
anti human GAL-A sera

B.



IF Homogenate

Fig. 3

# Accumulation and Activity of WT and ER-Targeted rGal-A

A.

Uninf. rGAL-A rGAL-A-R



Mr kDa

45 —

1 2 3

Western Analysis  
total plant soluble extract  
anti human GAL-A sera

B.

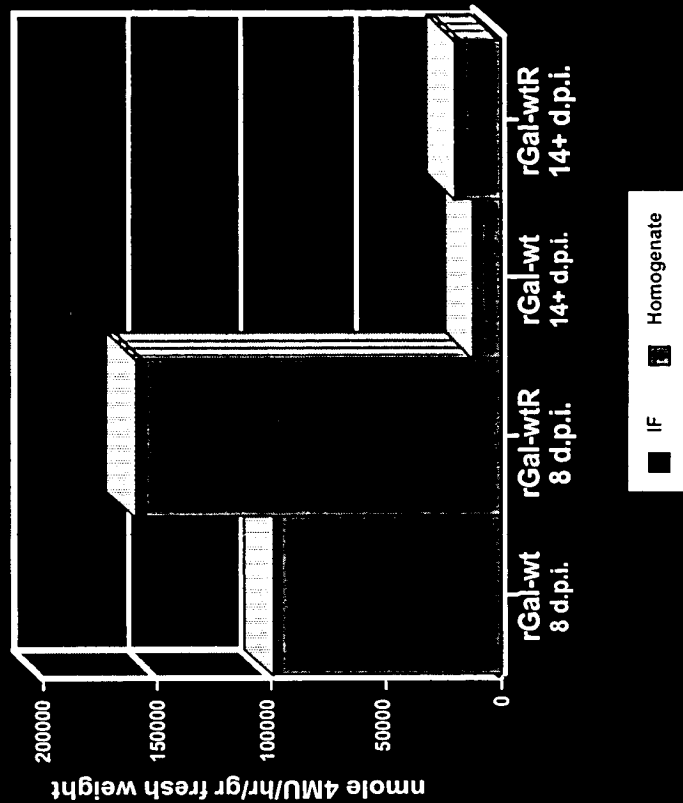


Fig. 4

# Carboxy-Modifications to rGal-A

	-30	-20	-10
WT	TSRLRSHINPTGTVLLQ	LENTMQMSLKDLL	
WTR	TSRLRSHINPTGTVLLQ	LENTMQMSLKDLLSEKDI	
? 4	TSRLRSHINPTGTVLLQ	LENTMQMSL	
? 4R	TSRLRSHINPTGTVLLQ	LENTMQMSLSEKDEL	
? 8	TSRLRSHINPTGTVLLQ	LENTM	
? 8R	TSRLRSHINPTGTVLLQ	LENTMSEKDEL	
? 12	TSRLRSHINPTGTVLLQ	L	
? 12R	TSRLRSHINPTGTVLLQ	LSEKDEL	
? 25	TSRLR		
? 25R	TSRLRSEKDEL		
Control virus (GFP, AMP, IFN $\gamma$ )			

\* potential CTPP cleavage (Gene 58:177, 1987).

# Western Blot Analysis of Carboxy-modified rGal-A

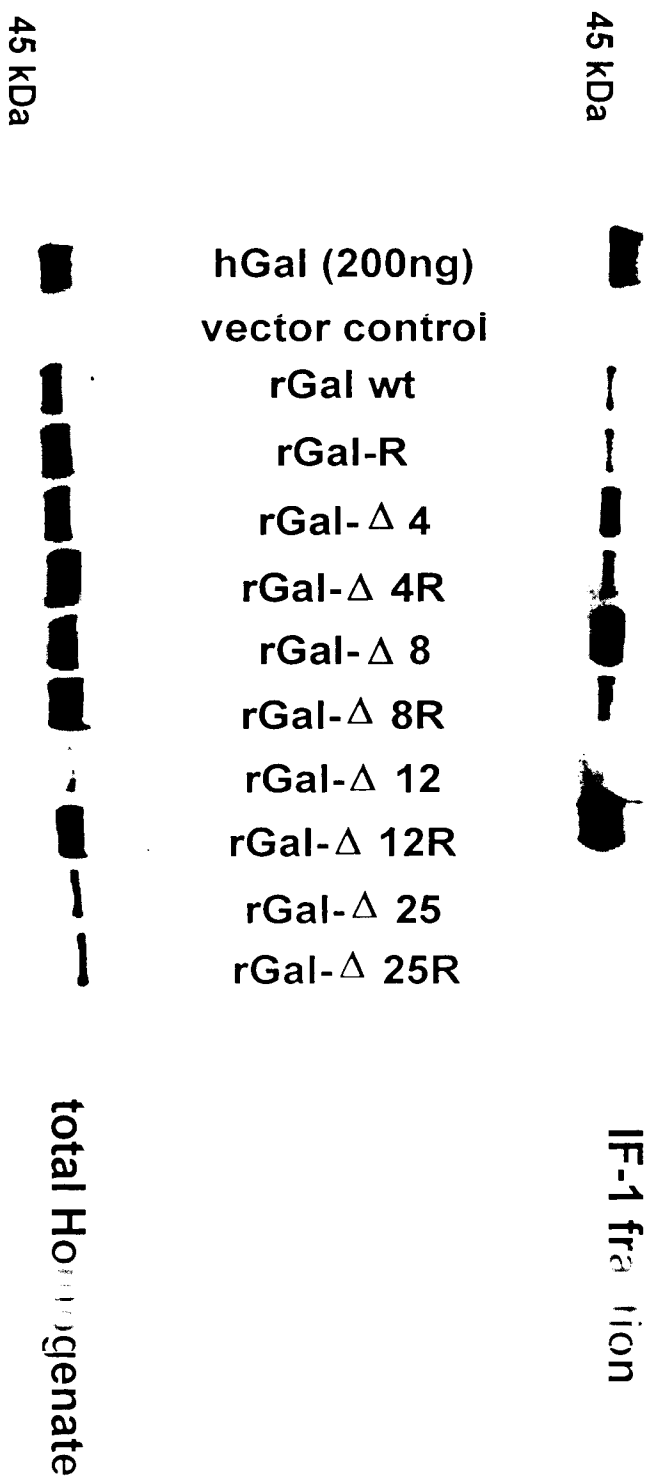
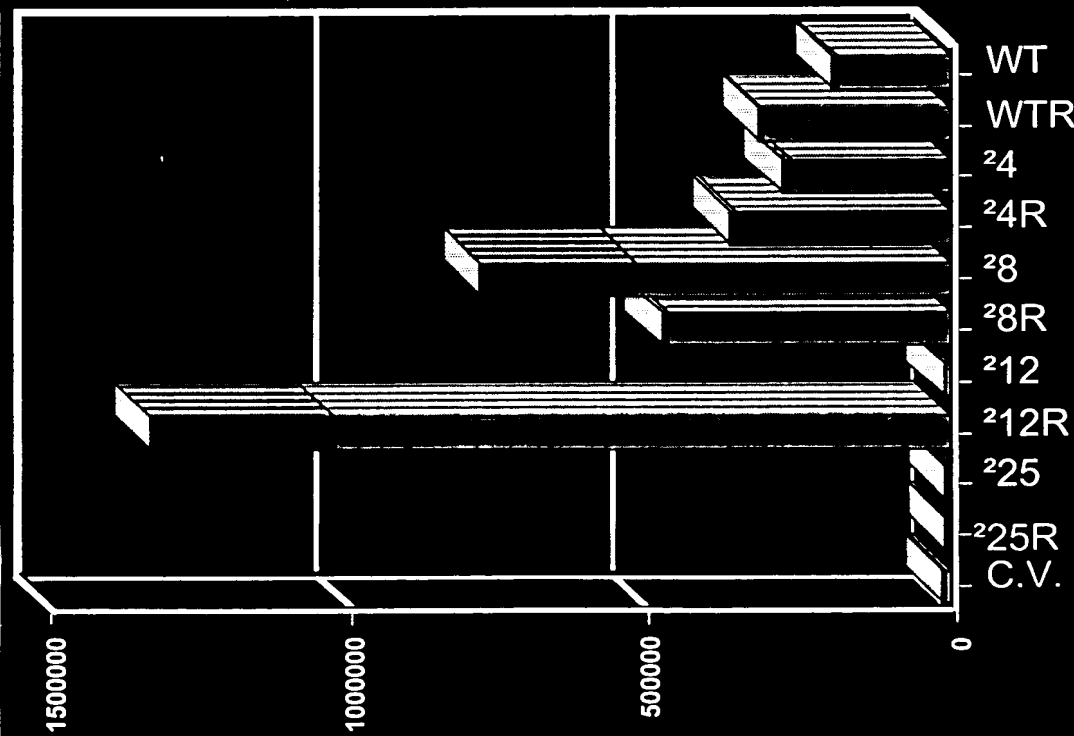


Fig. 6

# Enzymatic Activity of Carboxy-Modified rGal-A



	-30	-20	-10
WT	* TSRLRSHINPTGTVLLQLENTMQMSLKDLL		
WTR	TSRLRSHINPTGTVLLQLENTMQMSLKDLLSEKDEL		
<sup>2</sup> 4	TSRLRSHINPTGTVLLQLENTMQMSL		
<sup>2</sup> 4R	TSRLRSHINPTGTVLLQLENTMQMSLKDEL		
<sup>2</sup> 8	TSRLRSHINPTGTVLLQLENTM		
<sup>2</sup> 8R	TSRLRSHINPTGTVLLQLENTMSEKDEL		
<sup>2</sup> 12	TSRLRSHINPTGTVLLQL		
<sup>2</sup> 12R	TSRLRSHINPTGTVLLQLSEKDEL		
<sup>2</sup> 25	TSRLR		
<sup>2</sup> 25R	TSRLRSEKDEL		
Control virus (GFP, AMP, IFN $\gamma$ )			

\* potential CTPP cleavage (Gene 58:177,1987).

■ IF    ▨ Homogenate

Fig. 7

# Coomassie Stain - IF

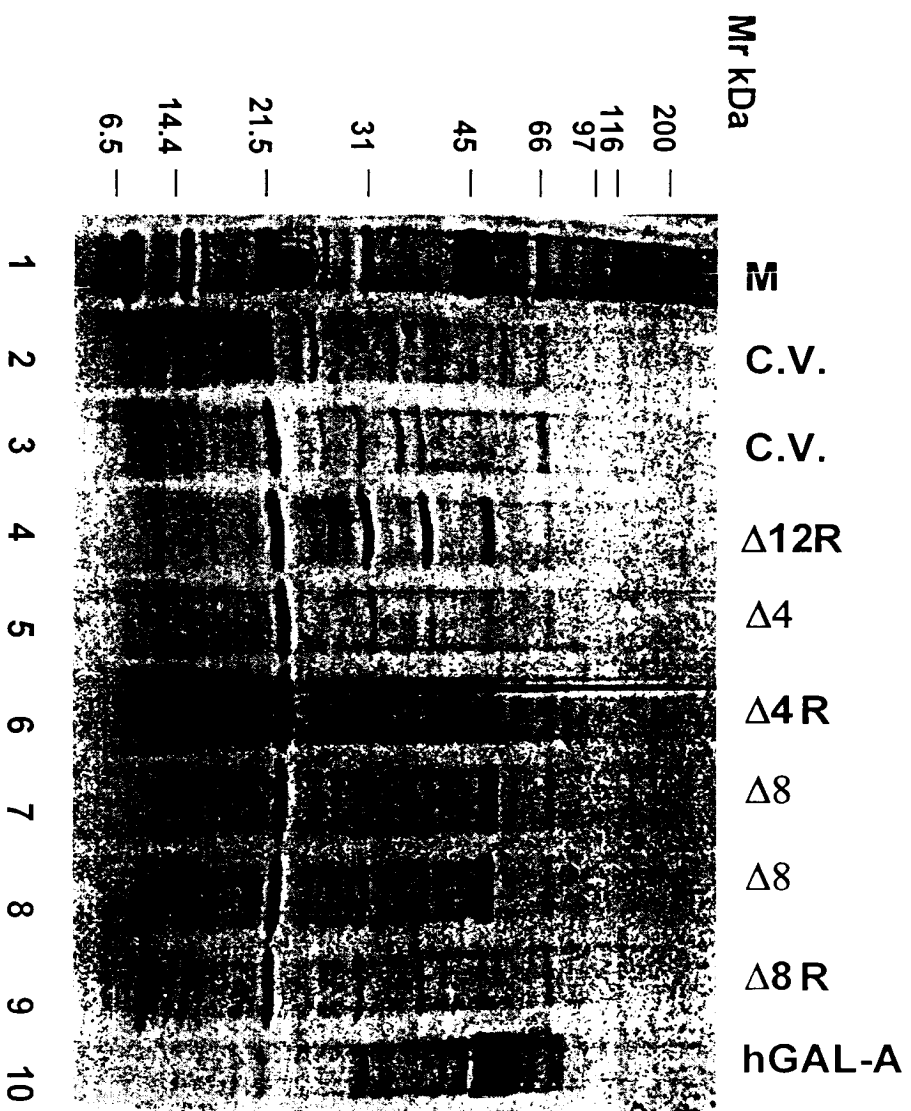


Fig. 8



# Coomassie Stain - IF

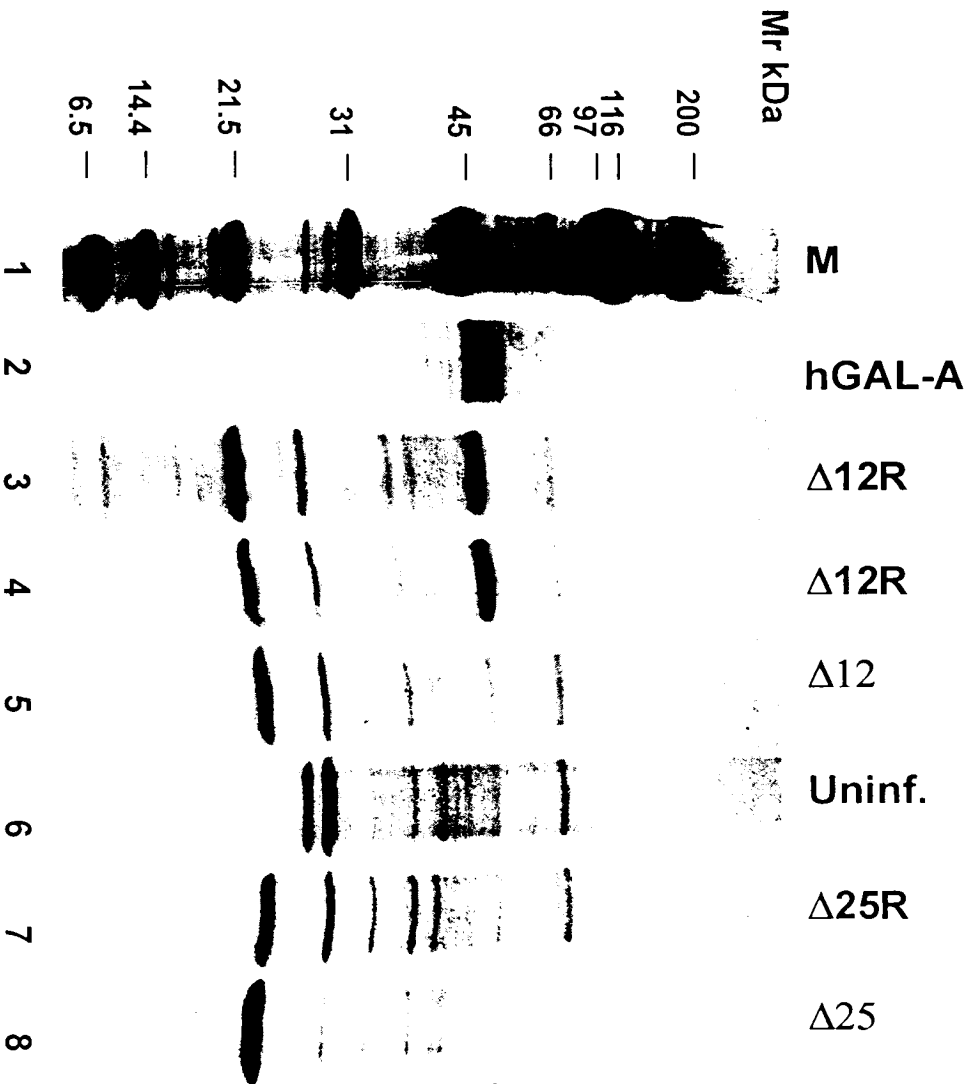


Fig. 9

# Schematic of rGal-A Secretion

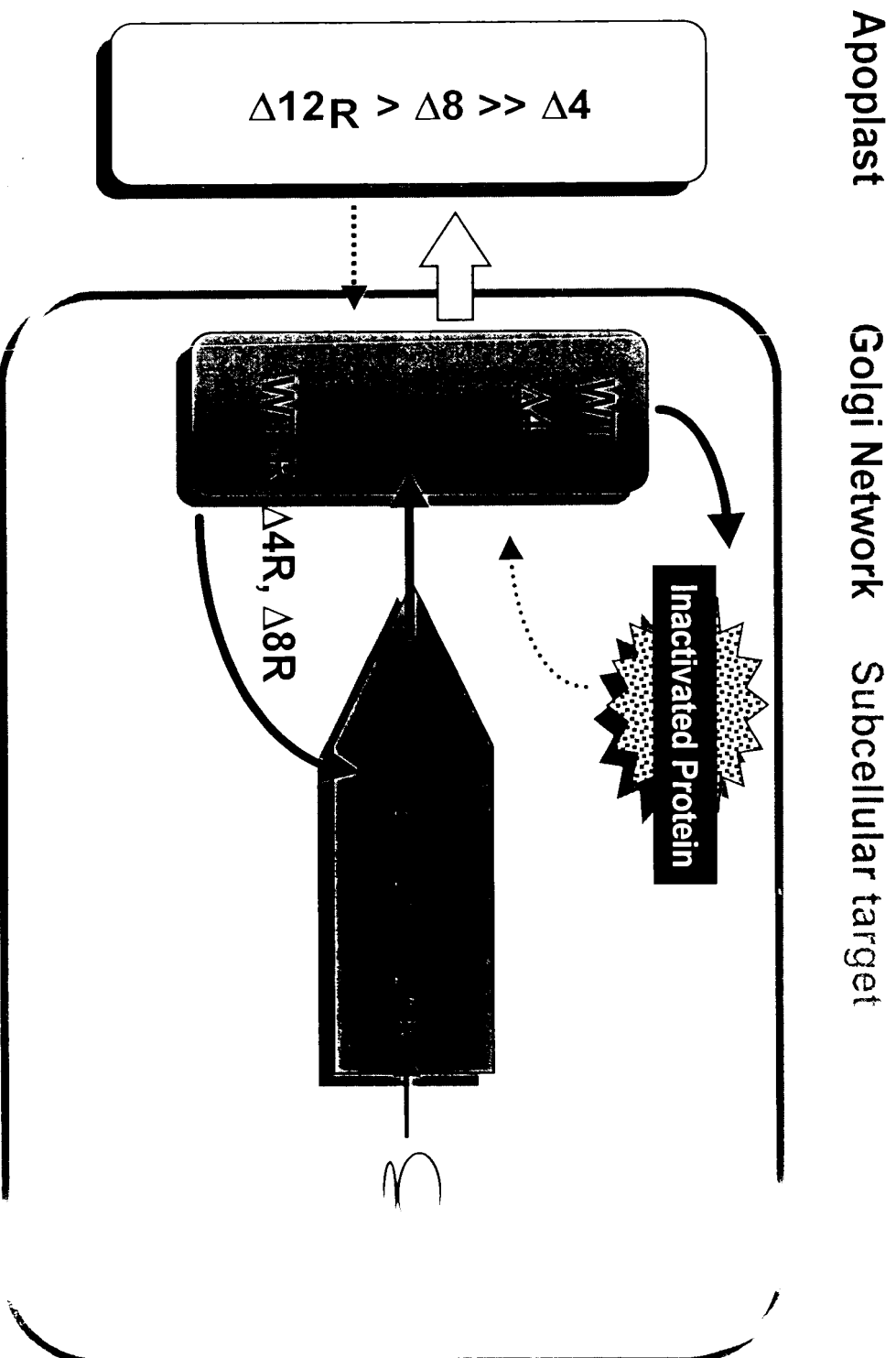


FIGURE 10

FIGURE 11

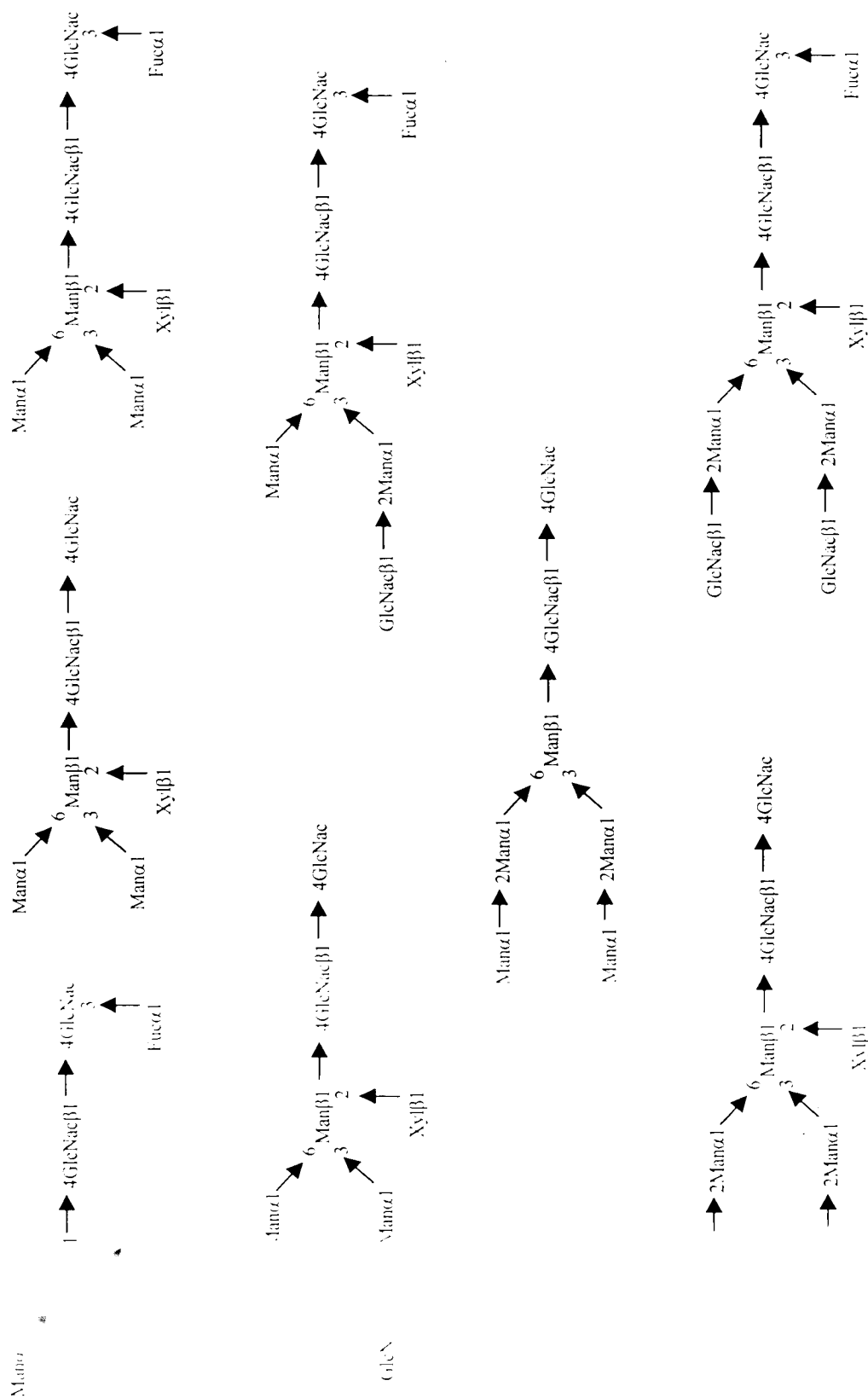


FIGURE 12

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FIGURE 13

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ACTATTTACAATTACAATGGCATAACACA  
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